



NOVA School of Science and Technology
Mobile and Pervasive Computing



BrightBalance+

Intelligent lighting and temperature control for Sustainable Living

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Motivation

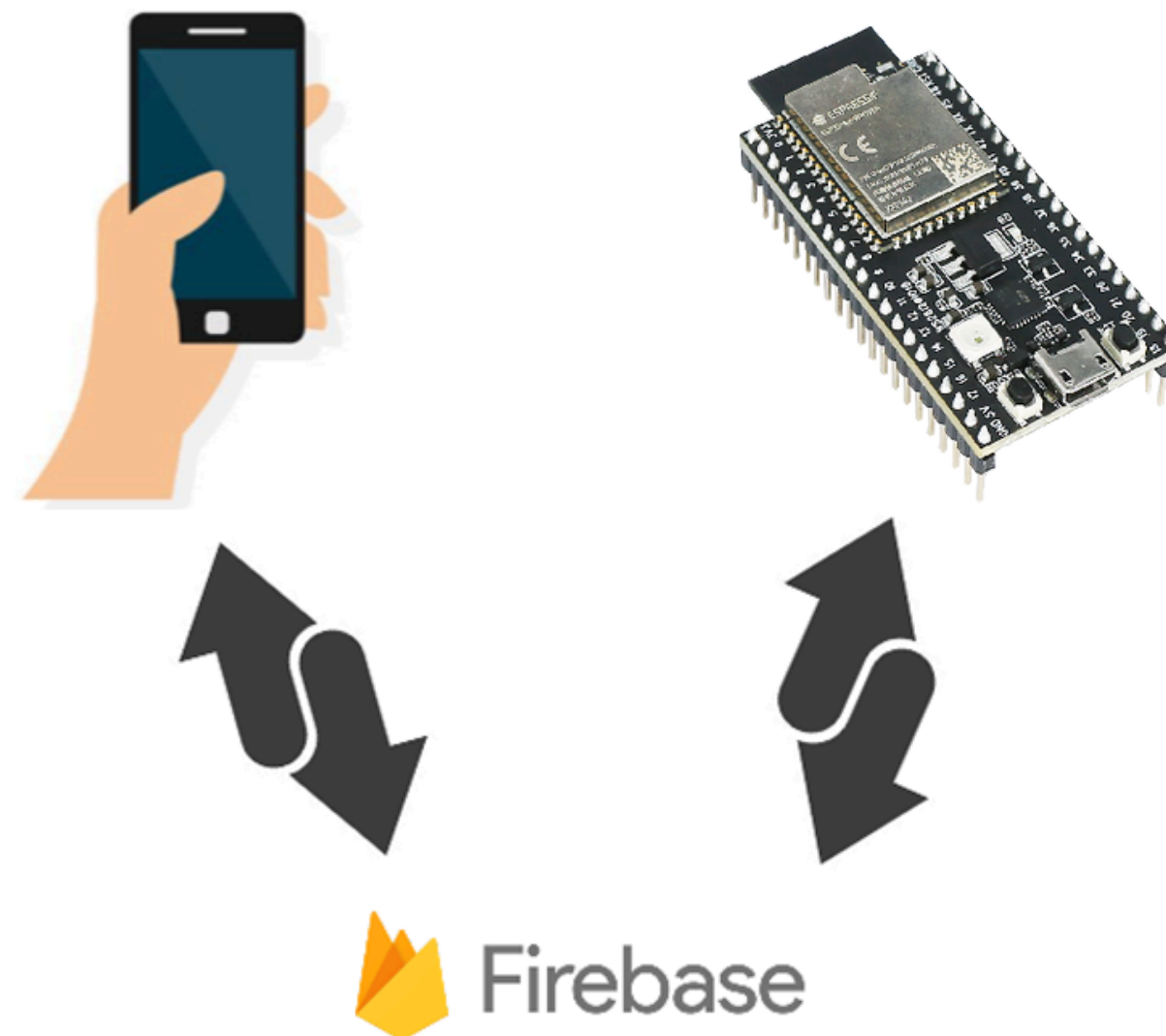
- Technological advances and discoveries occur every day
- Need for conscious attitude towards spending day-to-day resources
- **Sustainability** - Efficient resource usage is key

Solution

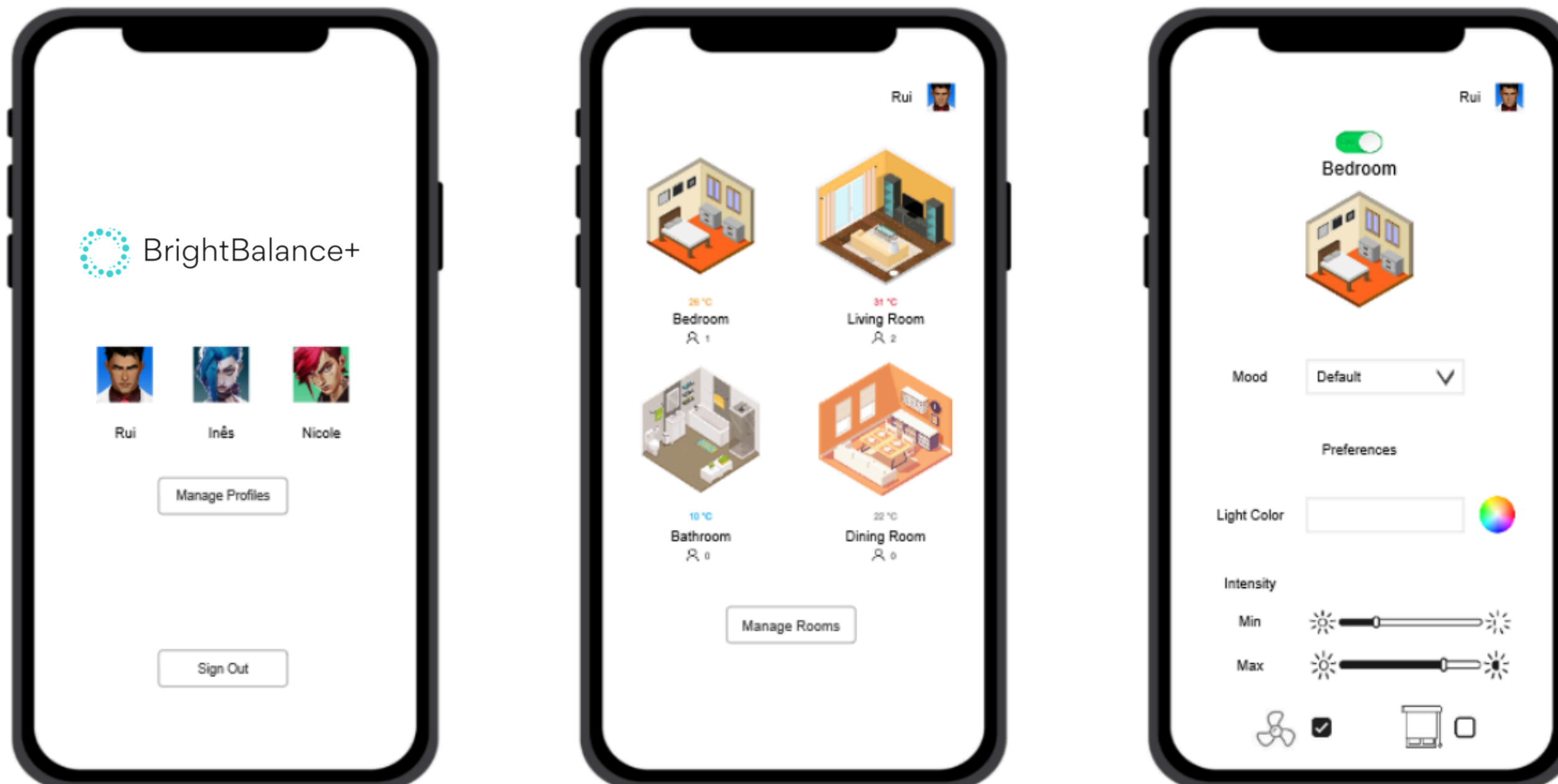
- Smart system mainly focused on light intensity management
- Adjust light emission based on sunlight existence or absence
- User preferences influence the system's behaviour



System Architecture



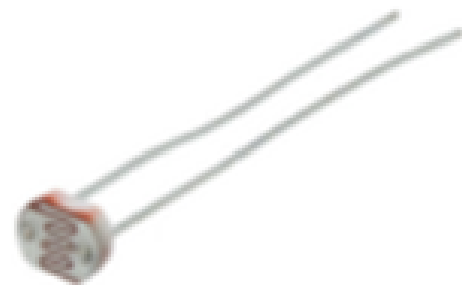
Mobile Application



Ubiquitous System

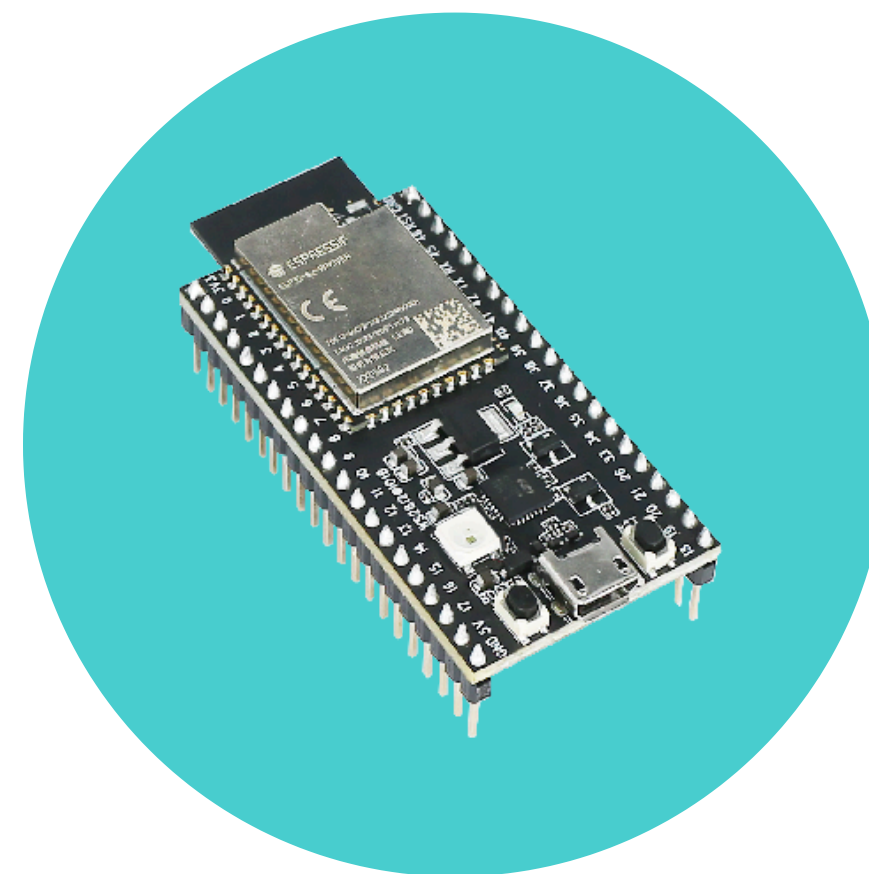
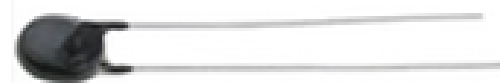
Light Dependent Resistors

Indoor and Outdoor



Temperature Sensors

Indoor and Outdoor



Microcontroller
ESP32S2 Saola Wroom

RGB Light Emitter Diode

Indoor



Blinds

Indoor



Fan

Indoor



Thank you!

Do you have any questions?

